MEIJING LIANG

Cell: (509) 338-5185 Email: meijing.liang@wsu.edu Office: 403 Plant Science Building, Pullman, WA 99164, USA

SKILLS & CERTIFICATES

Programming Languages: R, Python, HTML, and Linux
Software: QGIS, PIX4D, Adobe Dreamweaver, Adobe Photoshop
Licenses: Remote Pilot (Drone) License (Cert# 4501022)
UAVs Operated: DJI Inspire 2, DJI Phantom 4, DJI Mavic 3T, DJI Air 2S, DJI Air 3S, and DJI Mini 4 Pro
Builder & Administer of Lab Website: https://zzlab.net

EDUCATION

WASHINGTON STATE UNIVERSITY, *Pullman, WA* **2021 – Present**

- Ph.D. student in Crop Science
- Research Areas: Genome-Wide Association Study & Gnomic Selection in crops, wheat kernel image classification with Convolutional Neural Networks, and alfalfa forage prediction using UAV imagery
- Related Courses: Plant Breeding, Bioinformatics, GIS Spatial Analysis, Remote Sensing, Population Genetics, Computational & Analytical Methods in R

WASHINGTON STATE UNIVERSITY- IAREC, *Prosser, WA* **2018 – 2021**

- Visiting Scholar in Crop Science
- Research Areas: Increasing alfalfa forage yield, forage quality, and seed yield through improved management practices, plant breeding, and other strategies to reduce biotic and abiotic stresses and production costs

WASHINGTON STATE UNIVERSITY, *Pullman, WA* **2016 – 2018**

- Visiting Scholar in Crop Science
- Research Areas: Genome-Wide Association Study in Soft Winter White Wheat

NORTHEAST AGRICULTURAL UNIVERSITY (NEAU), *Harbin, China* **2012 – 2015**

- MS in Animal Genetics, Breeding & Reproduction
- Dissertation: *Genetic Parameter Estimates of Liver Fat Traits in Broiler Lines Divergently Selected for Abdominal Fat and Construction of Chicken Body Fat Related Gene Database*
- Related Courses: Quantitative Genetics, Population Genetics, Genetic Marker Principles and Methods, Bioinformatics Principles and Application, Animal Experiment Statistical Analysis, Advanced Animal Biochemistry

NORTHEAST AGRICULTURAL UNIVERSITY, *Harbin, China* **2008 – 2012**

- BS in Animal Science
- Dissertation: *Target Gene Prediction and Analysis of Chicken Non-Coding RNA*
- Related Courses: Animal Physiology, Animal Histology and Embryology, Animal Biochemistry, Animal Genetics, Biostatistics, Microbiology and Immunology, Animal Nutriology, General Veterinary Medicine, Animal Breeding

TEACHING ASSISTANTSHIPS

WASHINGTON STATE UNIVERSITY, *Pullman, WA*

- CROP SCI 545 Statistical Genomics **Spring 2025**
- SOIL SCI 368 Geographic Information Systems **Fall 2023**
- SOIL SCI 374 Introduction to Remote Sensing **Spring 2023**
- SOIL SCI 368 Geographic Information Systems **Fall 2022**

PUBLICATIONS

1. C. Ocaña-Gallegos, **M. Liang**, E. McGinty, Z. Zhang, K. Murphy, A. Hauvermale. 2024. Preharvest Sprouting in Quinoa: A New Screening Method Adapted to Panicles and GWAS Components. *Plants* 13(10): 1297.

2. C. Ocaña-Gallegos, **M. Liang**, E. McGinty, Z. Zhang, A. Hauvermale, K. Murphy. 2024. Genome-Wide Association Study on Preharvest Sprouting in Quinoa. *International Plant & Animal Genome Conference 31*.

3. H. Li, M. Qi, B. Du, Q. Li, H. Gao, J. Yu, C. Bi, H. Yu, **M. Liang**, G. Ye, Y. Tang. 2023. Maize Disease Classification System Design Based on Improved ConvNeXt. *Sustainability* 15(20), p.14858.

4. Q. Wu, X. Ma, H. Liu, C. Bi, H. Yu, **M. Liang**, J. Zhang, Q. Li, Y. Tang, G. Ye. 2023. A classification method for soybean leaf diseases based on an improved ConvNeXt model. *Scientific Reports* 13(1), p.19141.

5. **M. Liang**, H. Dong, S.W. Carle, N. Wen, J. Lamkey, A. Carter, Z. Zhang, K. Campbell. 2019. Genome-Wide Association Study Navigates Wheat Spike Compactness *(C)* Locus to Domestication *Q* Gene Homolog Gene *TAPARG* on 2DL Near Centromere. *International Plant & Animal Genome Conference XXVII* PE0998.

6. **M. Liang**, Z. Zhang. 2018. Inflated False Positives behind a Beautiful QQ Plot in GWAS. *International Plant & Animal Genome Conference XXVI* P0040.

7. **M. Liang**, Z. Wang, L. Xu, L. Leng, S. Wang, P. Luan, Z. Cao, Y. Li, H. Li. 2015. Estimating the genetic parameters for liver fat traits in broiler lines divergently selected for abdominal fat. *Genet. Mol. Res* 14:9646-54.

8. **M. Liang**, Z. Wang, H. Li. 2015. Structural Comparison and Functional Analysis of Chickens of the *LET-7* Family. *Poultry Branch, Chinese Association of Animal Science and Veterinary Medicine* 21.

9. Z. Wang, Y. Guo, **M. Liang**. 2014. Research Progress on Related Database for Animal Transcription Factors. *Animal Husbandry and Feed Science* 35(12): 28-30.

10. **M. Liang**, Z. Wang, H. Li. 2014. Target Gene Prediction and Functional Analysis of Animal Fat Metabolism Related Mirna. Information Technology Branch, *Chinese Association of Animal Science and Veterinary Medicine* 58-63.

11. **M. Liang**, Z. Wang, H. Li. 2014. Estimates of Genetic Parameters for Liver Fat Content in Broiler Lines Divergently Selected for Abdominal Fat. *The 34th International Society for Animal Genetics Conference* P1029.

PROFESSIONAL ACTIVITIES

Reviewer for Bioinformatics Advances Journal — **Apr. 2024 - Jun. 2024**

Presenter at R Working Group Workshop, *Topic: Introduction to R* — **Feb. 7th 2024**

Presenter at the International Plant & Animal Genome Conference 31, *Topic: Genome-Wide Association Study on Preharvest Sprouting in Quinoa* — **Jan. 13th 2024**

Presenter at R Working Group Workshop, *Topic: Statistical Genomics with GAPIT* — **Oct. 24th 2023**

Presenter at R Working Group Workshop, *Topic: Introduction to R* — **Sep. 26th 2023**

Head of Washington State University R Working Group — **Aug. 2023 - Present**

Reviewer for Bioinformatics Journal — **Jun. 2023 - Aug. 2023**

Guest Lecturer for CROP_SCI-545 Statistical Genomics Course, Topic: *R Markdown* — **Jan. 12th 2023**

TRAINING & INTERNSHIPS

CEREO R WORKSHOP FOR REU STUDENTS, *Pullman, Washington* — **Jun. 2023**

- Provided guidance, support, and troubleshooting assistance to facilitate a smooth learning experience for undergraduates.

WSU ENTREPRENEURSHIP SKILLS AND KNOWLEDGE ACCELERATOR, *Pullman, Washington* **Jun. 2023**

- Enhanced knowledge in entrepreneurship, finance, management, and marketing.

FEMALE VILLAGE OFFICIAL CONSULTANT, *Heilongjiang, China* **Dec. 2009 – Dec. 2010**

- Supported female village official by teaching science and technology to farmers.

HARBIN WEIPENG FEED CO., LTD. , *Harbin, China* **Jul. 2011 – Aug. 2011**

- Collaborated with Dairy Cattle farmers to record milk production and change dairy feed.

NEAU POULTRY RESEARCH FARM, *Acheng, China* **Mar. 2012 – Jul. 2012**

- Raised white-feathered broiler chickens for research purposes.

AWARDS & HONORS

Roscoe and Frances Cox Scholarship (Department of Crop & Soil Science Scholarship, WSU) **Apr. 2024**

Thomas and Catherine Hyslop Family Graduate Fellowship (Department of Crop & Soil Science Scholarship, WSU) **Mar. 2023**

AgAID Digital Agathon Labor Challenge Competition 4th Prize **Jan. 2023**

Second Prize Scholarship for NEAU Graduate Student **Nov. 2015**

Excellent Graduates Honorary Title of Heilongjiang Province **Mar. 2012**

Third Prize for NEAU Mathematical Modeling Competition **May 2012**

Third Prize for Harbin Industrial Designs Competition **Mar. 2011**

- *Approved for Appearance Design Patent*

Second Prize Scholarship for NEAU Comprehensive Quality 2010-2011 **Nov. 2011**

NEAU Academic Excellence Award **Nov. 2011**

NEAU Innovation and Technology Scholarship Award **Nov. 2011**

Excellence Award for NEAU Book Reading Symposium **Mar. 2010**

Third Prize Scholarship for NEAU Comprehensive Quality 2009-2010 **Nov. 2010**

Third Prize Scholarship for NEAU Comprehensive Quality 2008-2009 **Nov. 2009**

GRANTS

Commercialization Gap Fund at Washington State University

1/1/2024-12/31/2025

"Computer Aided Grain Inspection of Club Wheat Identification", $50,000

2023-2024 Harry E. Goldsworthy Wheat Research Fund at Washington State University

10/11/2023-12/31/2024

"Computer-Aided Club Wheat Inspection and Classification Using Neural Networks" (Award number PG00022247), $2,500